**Birzeit University**

**Physics Department**

**Physics 112**

Experiment No.1

Linear and non-linear Circuit Components

**Student’s Name:** Hala Mohammed **Student’s No.:**1210312

**Partner’s Name:** Sujood Shbat **Partner’s No.:**1182119

**Section:** 9

**Date:** 19\07\2022

**Instructor:** Khalid Eid

**Abstract:**

A suitable circuit is connected, the voltage value is changed using the variable resistance, and then the voltage and current values are read, and several readings are written for each component. It was concluded that the carbon resistance is linear and that the lamp bulb and the diode are non-linear circuit components.

**Calculations:**

From the graph:

The carbon resistance:

R (experimental) =

**Results & Conclusion:**

From the results we find that the carbon resistor is a linear component, and diode is non-linear and the light bulb seemed to have a nonlinear resistance while starting to turn on because of the increase of temperature, and then obtains a linear resistance after a while.

So the Diode and the light bulb are non linear components, and don’t obey Ohm’s law.